The ArkLaMiss Observer

Summer 2010 Edition

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INSIDE THIS EDITION!

April 24th Long Track Violent Tornado

By Chad Entremont, Forecaster

During the midday hours of April 24th, a violent long track tornado ripped a 149 mile path across the center of the NWS Jackson, MS forecast area. This tornado was responsible for 10 fatalities along with 146 injuries as it impacted 1 parish and 8 counties.

The environment that day was very favorable for severe storms with high levels of instability and extreme wind shear. The weather pattern exhibited a classic setup for a outbreak of severe storms that included a deepening surface low centered over northeast Oklahoma, and rich Gulf moisture located between a warm front lying across northern Mississippi and a modified dry line moving east across Louisiana. Several significant severe weather parameters were peaking at levels rarely seen leading into a severe weather event. The potential for severe weather was outlooked several days in advance with the possibility for this event to produce significant severe weather.

Before the long track tornado touched down, severe weather was ongoing across eastern and south-eastern Mississippi. This tornado was spawned from a quickly evolving supercell thunderstorm tracking across north-central Louisiana. The tornado touched down just south of Interstate 20, roughly 5 miles west of Tallulah, in Madison Parish Louisiana. The tornado intensified quickly and became large as it tracked at a fast pace to the northeast. The tornado dissipated about 5 miles north of Sturgis Mississippi, in Oktibbeha County. The tornado moved at an average speed of 55 mph during its life cycle, and was on the ground for 149 miles. The actual time on the ground was 2 hours and 44 minutes.

The most significant damage occurred in Madison Parish, Warren, Yazoo, Holmes, Attala and Choctaw Counties. Across Madison Parish, several structures were damaged or destroyed along Willow Bayou Road and a chemical plant was destroyed in

the Omega Community just north of Tallulah.

Figure 1. Image of the tornado to the southwest of Yazoo City (courtesy of Reed Timmer and Tornadovideos.net).

Figure 2. Map of tornado track.

The tornado tracked across the Mississippi River and ripped through the Eagle Lake Community and destroyed or damaged nearly 30 homes. The tornado then tracked across rural areas of Issaquena and Sharkey Counties where large amounts of timber were destroyed. As the tornado entered Yazoo County, it grew larger and tracked toward Yazoo City.

Figure 3. Destroyed chemical plant in Omega, LA (courtesy NWS Jackson).

The tornado reached its widest and most intense point as it tracked across the southern and southeastern portion of Yazoo City. Numerous structures were damaged and several leveled. Tree damage was extensive as the tornado reached a width of 1.75 miles.

Figure 4. Destroyed church in Yazoo City (courtesy NWS Jackson)

Dozens of structures were damaged as the tornado tracked into Holmes County and crossed Interstate 55. After this point, the tornado weakened some but continued its steady course into and across Attala County. The tornado moved across the Natchez Trace Parkway just south of French Camp and entered

Figure 5. Areal image, looking east, where the tornado crossed US Highway 49 on the south side of Yazoo City (courtesy of Allen Lieberman).

Choctaw County. Here, the tornado intensified once more, just a few miles east of French Camp in the community of Weir. Dozens of structures were damaged or destroyed between this point and the Chester Community.

Figure 6. Destroyed brick home in Weir, MS (courtesy NWS Jackson).

Figure 7. Vehicle and mobile home under carriage wrapped in a tree near Weir, MS (courtesy NWS Jackson).

The tornado then slowly weakened, but continued to down thousands of trees and numerous power lines as it tracked across eastern Choctaw County, eventually dissipating 5 miles north of Sturgis in west-central Oktibbeha County. A great deal of damage along the path was in the EF-2 to EF-3 range, with a couple areas in Yazoo and Holmes Counties receiving EF-4 damage. Maximum winds peaked around 170 mph. Of the 10 fatalities, 5 occurred in Choctaw County, 4 in Yazoo County, and 1 in Holmes County.

As we try to put this tornado into historical perspective for the state of Mississippi, this long track tornado is the widest known tornado with a maximum width of 1.75 miles. It also ranks as the 9th deadliest tornado with 10 fatalities, making it the deadliest since November 21, 1992. It ranks as the 4th longest in Mississippi history at 149 miles. Lastly, this was the first violent tornado (F4 or greater) in the month of April since April 18, 1978.

Tornado Fatality Analysis of the 2010 Spring Storms

By Steve Wilkinson, Warning Coordination Meteorologist

In the spring issue of this newsletter, we included an article that showed where tornado fatalities are most likely to occur across the United States. The maximum, as shown in Figure 1, is located across parts of Mississippi, Arkansas, Tennessee, Alabama, and Louisiana. One has to go back to 1992 to find a year where more than 10 tornado fatalities occurred in Mississippi. However, the storms of late April and early May 2010 produced 13 tornado fatalities in the state.

Figure 1. Areas Most Vulnerable to Tornado Fatalities.

Figure 2 shows where these fatalities occurred. Each dot represents a county where fatalities occurred, not all of the fatalities. As you can see, each of these fatalities occurred in the "Area Most Vulnerable to Tornado Fatalities".

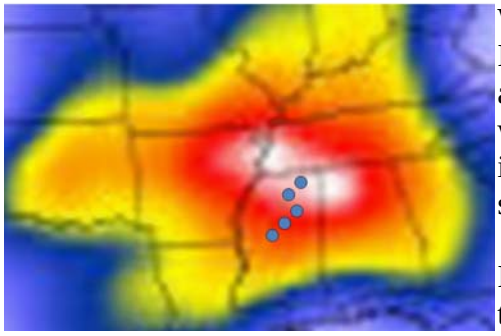

Figure 2. Locations of Fatalities in April-May Tornadoes.

Of the 13 fatalities, 8 occurred in manufactured homes, 2 occurred in a vehicle, 2 occurred outside, and only 1 occurred in a single family home. A single family home is generally considered to be built stronger than a manufactured home. Thus, 12 of the 13 fatalities (or 92%) occurred where people did not have sufficient shelter when the tornadoes hit.

We want to encourage people who live in manufactured homes to pay particular attention to when Tornado and Severe Thunderstorm Watches and Warnings are issued. If dangerous storms are approaching your area, seek shelter with a friend or neighbor who lives in a sturdy structure until the storms have passed.

If you are in a vehicle and a tornado or severe thunderstorm is approaching, seek shelter in a sturdy building if possible. If a sturdy building is not available, either stay buckled in your car or get out of the car and get in a low-lying area. No guidance will work in every situation, so determine what your best options are and act quickly.

Finally, we encourage everyone to purchase and properly program a NOAA Weather Radio. We also

advise that everyone have a second option to receive warnings in their homes, because communication systems occasionally fail. Do not rely solely on sirens, because they are meant to be an outdoor warning system in densely populated areas. Sirens are not installed in most rural areas, so people in most of this region will not be able to hear a siren.

NOAA Weather Radios may be purchased at various electronic stores and retail outlets such as: Walgreens, Radio Shack, Kroger, Amazon.com to name a few.

For more information on NOAA Weather Radio or to obtain county S.A.M.E. codes, please visit http://www.weather.gov/nwr or call NWS Jackson at 601-936-2189.

NOAA Weather Radio frequencies

Transmitter Site	Frequency
Inverness	162.550
Ackerman	162.475
Rose Hill/Meridian	162.550
Jackson	162.400
Bassfield	162.475
Bude	162.550
Fountain Hill, AR	162.475

By Ariel Cohen and Brad Bryant, Forecasters

Scientists of the National Oceanic and Atmospheric Administration (NOAA) are predicting that the 2010 hurricane season will be unusually active for the Atlantic Ocean, Caribbean Sea, and the Gulf of Mexico. In particular, the Climate Prediction Center has indicated that there is at least a 70% chance that the following tropical cyclone activity will occur this year:

*14-23 named storms,
*8-14 hurricanes, and
*3-7 major hurricanes

While there are many uncertainties in the exact number of tropical cyclones expected to form, meteorologists and climatologists are able to anticipate long-term trends in tropical cyclone activity by understanding the large-scale, or even global-scale, picture of the atmosphere. In this article, we will reveal some of the ingredients that support tropical cyclone activity and explain why meteorological conditions are likely coming together to support an active hurricane season this year.

Recipe for a Tropical Cyclone

As with any significant weather phenomenon, meteorologists consider many factors for the development and intensification of tropical cyclones. Here is a discussion of these factors.

First, tropical cyclones are dependent on being fueled by warm waters. Temperatures of at least 80°F throughout a depth of at least 150 feet are necessary to fuel the tropical cyclones by providing plenty of warmth and moisture in the lower levels of the atmosphere around the cyclone.

Next, tropical cyclones require temperatures throughout the atmosphere to fall a sufficient amount with increasing height. This allows for the development of atmospheric instability, which supports thunderstorms. The storms allow for the heat energy stored in the waters below the cyclone to be distributed throughout the atmosphere to energize the cyclone. Also, plenty of moisture needs to be present in the atmosphere to at least 3 miles above the water surface to support the development of the thunderstorms.

Additionally, the environment needs to feature a weather disturbance that provides atmospheric spin for a tropical cyclone to form. These weather disturbances include tropical waves, tropical disturbances, troughs of low pressure that

originate from outside the tropics, etc. For the tropical cyclone to continue to gain atmospheric spin, it must be at least 300 miles from the equator, where the earth's spin can contribute to the intensification of the cyclone.

Finally, a tropical cyclone requires weak vertical wind shear to develop. Vertical wind shear is the change in wind speed/direction with height. When winds increase substantially with height, it can be difficult for thunderstorms to organize near the center of the system, which can disrupt the intensification of the cyclone. On the other hand, when winds change little with height, thunderstorms can more easily organize near the center of the system, allowing the cyclone to further develop.

Ingredients for Tropical Cyclones Readily Available

There are three main factors across the tropical Atlantic Basin this year to make the formation of tropical cyclones much more likely than average. Factor one is the continuation of the tropical multi-decadal (a time period spanning multiple decades) signal which has contributed to the era of high tropical activity in the Atlantic Basin, beginning around 1995. The second factor is above average sea-surface temperatures in the main Atlantic tropical cyclone development region. The final main factor is the shifting away from El Niño and towards La Niña conditions in the equatorial Pacific.

The multi-decadal signal for increased tropical cyclone formation in the Atlantic Basin generally turns on and off every twenty to thirty years as a variety of large scale atmospheric and ocean circulations link together. Atmospheric conditions in the North Atlantic tend to force the tropical Atlantic Basin sea-surface temperatures higher and reduce overall wind shear in development regions when the multi-decadal signal is in the active phase. Put simply, the presence of this signal (which is generally expected to last another 10 years or so) increases the background risk for active hurricane seasons in the Atlantic Basin every year if nothing else is considered. However, there are indeed other factors to consider.

Although being in the midst of the tropical multi-decadal signal favoring increased activity suggests sea-surface temperatures will be above normal, that is not always the case on a year in and year out basis. Last hurricane season was a good example as cooler sea-surface temperatures helped keep the tropical Atlantic Basin activity in check. However, this season there are direct observations of sea-surface temperatures that confirm overall levels of warmth are way above normal. As mentioned in the discussion above, this warm water is needed to fuel tropical cyclone development and growth.

Finally, the shift towards La Niña conditions in the equatorial Pacific should affect the tropics globally, not just in the Pacific Ocean. La Niña conditions in the summer tend to shift the Intertropical Convergence Zone (ITCZ) further

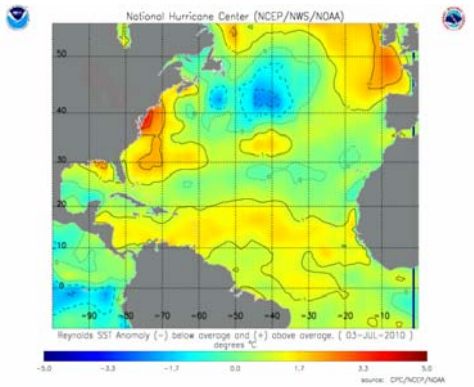

Figure 1. Sea surface temperature anomalies from the week of July 3, 2010. Warm colors indicate temperatures above normal. Cold colors show temperatures below normal.

north in the tropics than would normally be the case. This ITCZ is a rather continuous belt of atmospheric support for thunderstorms, which is shifted northward during the summertime relative to its position during the wintertime. The northward-shifted ITCZ has the general effect of increasing potential cyclonic spin in the atmospheric low levels across portions of the Atlantic Basin tropical cyclone development zone.

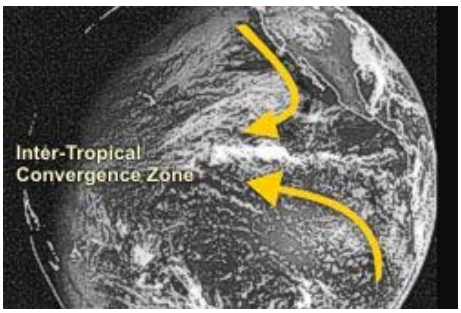

Figure 2. Location of the ITCZ. Photo courtesy of NWS JetStream.

As referred to earlier, this spin enhances areas of low pressure, which may eventually go on to develop into full-blown hurricanes. However for this level of development to occur there must also be relatively little vertical wind shear affecting a cyclone, a condition La Niña regimes tend to favor as well.

Some forecasters are trying to predict the total impact of tropical cyclones on the Gulf of Mexico this season, especially considering the oil spill containment and clean up efforts ongoing.

While there are quite a few signals suggesting above average tropical cyclone activity throughout the whole Atlantic Basin, science has not really progressed to the point where we can put much confidence in forecasts of where storms that have not even developed are likely to make landfall.

However, history of past big hurricane seasons has taught us that there are usually at least a few major impacts in the Gulf of Mexico. We have already had Hurricane Alex in the southwestern Gulf in late June and residents of the region must continue to remain vigilant through early Fall.

Alex	Hermine	Otto
Bonnie	Igor	Paula
Colin	Julia	Richard
Danielle	Karl	Shary
Earl	Lisa	Tomas
Fiona	Matthew	Virginie
Gaston	Nicole	Walter

2010 Hurricane Names. Names in red indicate storms that have occurred.

Introducing the Saffir-Simpson Hurricane Wind Scale

By Ariel Cohen, Forecaster

The National Hurricane Center provides a measure of the intensity of hurricanes using the Saffir-Simpson Hurricane Wind Scale. Specifically, this scale ranks a hurricane's intensity based on the maximum sustained surface wind speed of the hurricane. The scale ranges from Category 1, which includes the least intense hurricanes, up to Category 5, which includes the most intense hurricanes. Each category is associated with particular types of damage, and the degree of damage generally rises by a factor of four for each increase in category number. It is important to note that the scale does not factor in other hurricane-related impacts, which can be just as, or even more, destructive to the ArkLaMiss region. These impacts include flooding rains and tornadoes.

Prior to 2010, the National Hurricane Center used the Saffir-Simpson Hurricane Scale, as opposed to the Saffir-Simpson Hurricane *Wind* Scale, to describe the intensity of hurricanes. The earlier version of the scale included not only hurricane wind speed, but also other factors, including storm surge information and the minimum central pressure of the hurricane. However, these other factors were dependent on phenomena that are not directly related to the maximum wind strength of the hurricane. For example, Category 2 Hurricane Ike, which made landfall along the Texas coastline in 2008, produced storm surge values of 20 feet due to its large size. On the other hand, Category 4 Hurricane Charley, which made landfall in Florida in 2004, produced storm surge values of only 7 feet due to its small size.

Thus, while Hurricane Charley was much more intense than Hurricane Ike as far as wind speeds were concerned, the storm surge impact from Hurricane Ike was substantially greater. Since the objective of the hurricane intensity rating scale is to focus on wind strength, it has been revised to become the Saffir-Simpson Hurricane *Wind* Scale, and the associated storm surge and flooding impacts, as well as minimum central pressure statements, have been omitted. Below is a summary of the Saffir-Simpson Hurricane Wind Scale provided by the National Hurricane Center. For further damage descriptions, please visit the National Hurricane Center at www.nhc.noaa.gov.

Category One Hurricane
(Sustained winds 74-95 mph, 64-82 kt, or 119-153 km/hr): *Very dangerous winds will produce some damage.*

Category Two Hurricane
(Sustained winds 96-110 mph, 83-95 kt, or 154-177 km/hr): *Extremely dangerous winds will cause extensive damage.*

Category Three Hurricane
(Sustained winds 111-130 mph, 96-113 kt, or 178-209 km/hr): *Devastating damage will occur.*

Category Four Hurricane
(Sustained winds 131-155 mph, 114-135 kt, or 210-249 km/hr): *Catastrophic damage will occur.*

Category Five Hurricane
(Sustained winds greater than 155 mph, greater than 135 kt, or greater than 249 km/hr): *Catastrophic damage will occur.*

NWS Helps Support Deepwater Horizon Response

By Alan Gerard, Meteorologist In Charge

As everyone in our region is unfortunately aware, the explosion of the oil rig "Deepwater Horizon," and the resulting oil spill and response, has been the major national media story for weeks. As a "spill of national significance," this response has involved extensive resources from the private and public sectors. The National Weather Service has been an important part of the federal response to this incident.

Nearly all of the containment and cleanup efforts are extremely weather sensitive, from the wind and wave impacts to constructing containment boom, to the potential hazards of lightning and heat to cleanup crews on area beaches. Therefore, the NWS has put forth an unprecedented effort to provide weather support to all levels of this Deepwater Horizon response. This has included development of special web sites to provide critical weather information, as well as placing NWS meteorologists in the incident command centers (ICC) in Louisiana and Alabama to provide onsite weather support to the people overseeing the cleanup and containment. NWS Jackson has played its part by sending meteorologists from our office to work in the NWS New Orleans office. This has enabled meteorologists from that office, who are most familiar with the marine and atmospheric conditions of the local area, to be deployed to the incident command centers.

Additionally, NWS Jackson Decision Support Meteorologist Dan Byrd is a certified NWS Incident Meteorologist, and he spent two weeks at the regional ICC in Venice, LA, providing weather support.

The NWS will continue to provide state of the art weather support to the Deepwater Horizon effort in order to help the response be as efficient and effective as possible. Look for more information about the NWS's work in this effort in future newsletters.

Figure 1. Ship in the midst of oil contaminated water.

NWS JACKSON HONORED FOR LIFE SAVING WARNING

By Joanne Culin, Forecaster/Editor

This past April, forecasters Alan Campbell and Joanne Culin represented the Jackson National Weather Service (NWS) at a ceremony in Washington D.C. that honored numerous NOAA entities during 2008. The Jackson NWS office was recognized for outstanding efforts and a timely warning during a tornado event that occurred on January 10, 2008 in Mississippi. Alan and Joanne accepted the NOAA Bronze Medal on behalf of the NWS Jackson office at this ceremony.

Figure 1. Joanne Culin and Alan Campbell accept, on behalf of NWS Jackson, the Bronze Medal Award at NOAA Headquarters in Silver Spring, MD.

During the tornado event, an EF3 tornado, with maximum estimated winds of 155 mph, hit Caledonia High School. The school sustained extensive damage with the gymnasium being destroyed along with a number of school buses and vehicles in the area. Even though the school complex had 1900 people in it at the time of the tornado, only three minor injuries were reported at that location. A Tornado Warning was issued for this area by the NWS in Jackson about 39 minutes before the tornado developed to the southwest of Caledonia, and approximately 41 minutes before the damage occurred at Caledonia High School. The warning lead time for this tornado was substantially above the national average lead time of 14 minutes. In addition, with a tornado of this strength, it is remarkable and fortunate that there were no fatalities and only minor injuries. This speaks volumes of the work done by the Emergency Manager of Lowndes County, as well as the school principal to alert students and faculty and bring them to safety after receiving a very timely warning from the National Weather Service (see Spring 2008 edition for awards bestowed the Lowndes County Emergency Manager and Caledonia High School principal).

Figure 2. Caledonia High School complex a few days after an EF-3 tornado tore through the area.

The NOAA Bronze Medal Ceremony honors many people and entities throughout the NOAA organization. These include Fishery services, National Ocean Service, as well as the National Weather Service. The Bronze Medal is the highest honor award that can be granted by the Under Secretary of Commerce for the Oceans and Atmosphere division. Winners are recognized annually at a formal ceremony held in the Washington D.C. Metropolitan area. The medals are awarded to individuals, groups (or teams), and organizations. Other neighboring National Weather Service honorees at this year's event included NWS Little Rock, Nashville, Paducah, Memphis and Huntsville, along with the Storm Prediction Center, for their work during the Super Tuesday February 2008 tornado outbreak. Also, representatives from NWS offices in Shreveport, Lake Charles, New Orleans, and the Lower Mississippi River Forecast Center received awards for their efforts during Hurricanes Gustav and Ike. Many impactful weather events occurred during 2008, and being recognized for the outstanding work that is done to fulfill the mission of the National Weather Service to protect life and property is a great honor. However, we could not perform our mission as effectively without the dedication of storm spotters, emergency managers, and media partners, and we thank you for all of your contributions to our mission.

NWS JACKSON FEATURED IN CHILDREN'S BOOK

By Joanne Culin, Forecaster/Editor

In addition to receiving the NOAA Bronze medal for a timely life-saving warning during a tornado event in January 2008, the National Weather Service in Jackson is being featured in a book for children. Lynn Burse, Senior Forecaster at NWS Jackson, helped in creating a children's book detailing the tornado event in Caledonia. The book, entitled "Tornado! A Meteorologist and her Prediction", follows Burse and the NWS Jackson forecast team through the event.

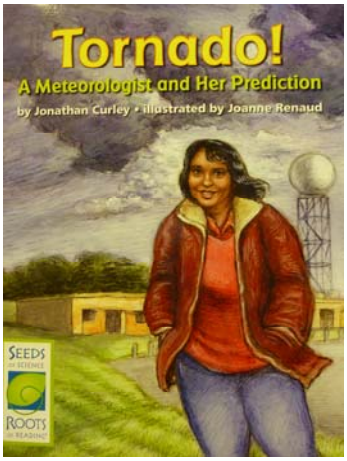

Figure 1. Children's book covering the Caledonia tornado event in January 2008. Illustration courtesy of Joanne Renourd.

This book explains how forecasters use models and weather information, including data collected from a weather balloon, to forecast hazardous weather and tornadoes. Burse was contacted around October 2008 by author Jonathan Curley, a graduate student at University of California – Berkeley, who was tasked in writing a book about meteorologists, and what they do.

This book was intended to be included in a series of books used in an elementary science curriculum. Illustrations were

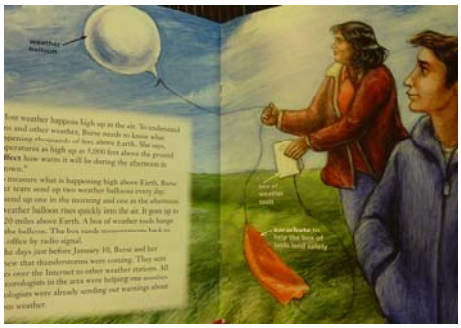

Figure 2. Weather balloons are discussed in this children's book. Illustration courtesy of Joanne Renourd.

provided by Joanne Renourd, including an illustration of members of the staff taken after the Caledonia tornado event (Figures 3 and 4). This book is published by Delta Publishing and can be ordered through the publisher's webpage at http://www.delta-education.com/.

Figure 3. Lynn and her team at the NWS. Illustration courtesy of Joanne Renourd.

Figure 4. Staff of the NWS Jackson following the Caledonia tornado event.

LIGHTNING SAFETY

By Joanne Culin, Forecaster/Editor

Summer is the time for people to enjoy many outdoor activities, but this can also be a dangerous time of year as well! In the South, we experience scattered showers and thunderstorms many afternoons during the peak daytime heating. With thunderstorms comes lightning. While lightning occurs year round, the summer months are

considered the most dangerous given the frequency of thunderstorms and the potential for people to be outside and not as aware of the weather. Lightning kills an average of 58 Americans each year and hundreds of people are permanently injured annually. This number is greater than the average of people killed by tornadoes and hurricanes. Due to the fact that lightning usually claims only one or two victims at a time and does not cause mass destruction of property, it is underrated as a risk. People struck by lightning suffer from a variety of long-term, debilitating symptoms, including memory loss, attention deficits, sleep disorders, chronic pain, numbness, dizziness, stiffness in joints, irritability, fatigue, weakness, muscle spasms, depression, and more. To date, there have been 14 fatalities in 11 states in 2010 from lightning. In 2009, there were 34 deaths in 22 states, including a death in Mississippi. Figure 1 depicts the number of deaths from lightning reported from 1959 through 2009, along with a color coded ranking of states. The state with the most lightning deaths is Florida with 460, followed by Texas with 210. Arkansas falls as number 11 with 122 deaths; Louisiana ranks 8th with 137 deaths and Mississippi falls at number 15 with 104 deaths. Statistics continue to show that many of the activities taking place when the deaths occur are those that could have been prevented had proper preparedness rules been followed.

So, how can you stay safe from lightning? The best phrase to remember is When Thunder Roars, Go Indoors! If you can hear thunder (even a distant rumble), you are close enough to be struck by lightning! Lightning can travel horizontally many miles away from the storm and then strike the ground. This is termed "Bolt from the Blue", because these lightning strikes seem to come out of a clear blue sky. Lightning can strike up to 10 miles away from the thunderstorm!

Look for signs of potential hazardous weather approaching, such as darkening skies, or increasing wind. This could mean a storm is approaching and you should take shelter. When taking shelter, the best place to go is into a sturdy structure that is fully enclosed. Picnic shelters, beach pavilions, carports, covered patios, tents, dugouts, and sheds do not provide adequate shelter! If adequate shelter is not near, get into a metal hard top car and close all of the windows. Do not take shelter in convertibles, golf carts, or boats without cabins! Overall, do not remain outside! There is no place outside that is a safe shelter from lightning! When in your shelter, stay inside until 30 minutes after the last thunder is heard.

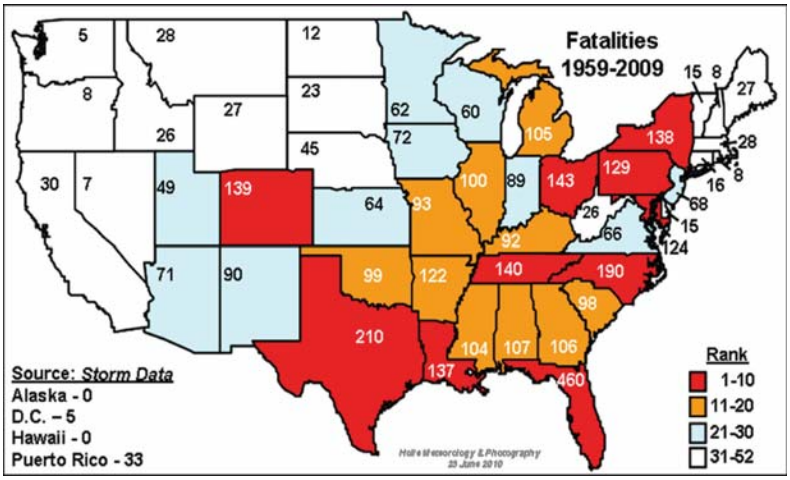

Figure 1. Number of lightning fatalities by state, 1959-2009. Courtesy of Storm Data.

Lightning Safety Tips

*Don't be the tallest object. When electrical charges separate in the cloud, the bottom of the cloud looks for charges at the ground to make a connection. This is usually done the shortest way possible to the ground.

* Do not stand under a tall object such as a tree. The object can catch on fire, or transfer the electrical charge to you.

*When inside, do not use a corded phone or any electrical appliances/equipment. If lightning strikes your house or near your house, it can travel through the electrical and phone lines to reach the ground. If you are using anything that plugs into the wall, you may be in the path of that surge of electricity! Cordless and cell phones are safe to use.

*Do not take a bath/shower or wash dishes during a storm. Pipes conduct electricity.

*Don't forget your pet! Dog houses are not safe shelters and please do not leave dogs changed to a tree or fence!

*Do not unplug appliances during a lightning storm. Do this before the storm occurs! You may get shocked while unplugging the appliance!

There are times when we are participating in activities that do not allow us to return to a safe building or vehicle, such as camping, hiking, being on a motorcycle or bike, or scuba diving. There are some things that you can do that may slightly lessen the odds of being struck but will not prevent you from being struck!

*Know the weather patterns of the area. If you know that the location is susceptible of getting afternoon thunderstorms, then plan a hike or a swim for earlier in the day or morning hours. Pay attention to the weather forecast for the area you plan to be in.

*If camping or hiking far from a safe shelter, try to avoid open fields or the top of a hill.

*Stay away from isolated trees. If you are in a forest, stay near a group of low height trees.

*If camping, set up camp in a lower valley, or ravine. However, a tent offers no protection from lightning!

Lightning Myths

MYTH: Rubber tires protect you from lightning in a car by insulating you from the ground.

TRUTH: Most cars are reasonably safe from lightning. But it's the metal roof and metal sides that protect you, not the rubber tires. Thus convertibles, motorcycles, bicycles, open shelled outdoor recreational vehicles, and cars with plastic or fiberglass shells offer no lightning protection. Likewise, farm and construction vehicles with open cockpits offer no lightning protection. But closed cockpits with metal roof and sides are safer than going outside.

MYTH: A lightning victim is electrified. If you touch them, you'll be electrocuted.

TRUTH: The human body does not store electricity. It is perfectly safe to touch a lightning victim to give them first aid. This is the most chilling of lightning myths. Imagine if someone died because people were afraid to give CPR!

MYTH: If trapped outside and lightning is about to strike, I should lie flat on the ground.

TRUTH: Lying flat increases your chance of being hit by a ground current. If you are caught outside in a thunderstorm, keep moving toward a safe shelter.

MYTH: Structures with metal, or metal on the body (jewelry, cell phones, Mp3 players, watches, etc), attract lightning.

TRUTH: Height, pointy shape, and isolation are the dominant factors controlling where a lightning bolt will strike. The presence of metal makes absolutely no difference on where lightning strikes. Mountains are made of stone but get struck by lightning many times a year. When lightning threatens, take proper protective action immediately by seeking a safe shelter – don't waste time removing metal. While metal does not attract lightning, it does conduct it so stay away from metal fences, railing, bleachers, etc.

For more information on lightning and lightning safety, please visit www.lightningsafety.noaa.gov.

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